# APPENDIX H

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1. Turtles brought to the processing laboratory on wet, blue, or dry ice should be placed in a freezer for a minimum of 48 hours prior to resection. Profound hypothermia can be employed to induce death (Frye, 1994) Decapitation of alert animals is not recommended because there is evidence that decapitation does not produce instantaneous loss of consciousness (Frye, 1994).

2. The turtle should be placed on its back with the plastron (ventral plate) facing upwards. The carapace and plastron are joined by a bony bridge on each side of the body extending between the fore and hindlimbs (Figure H-1). Using a bone shears, pliers, or sharp knife, break away the two sides of the carapace from the plastron between the fore and hind legs on each side of the body.

3. Remove the plastron to view the interior of the body cavity. At this point, muscle tissue from the forelimbs, hindlimbs, tail (posterior to the anus), and neck can be resected from the body. The muscle tissue should be skinned and the bones should be removed prior to homogenization of the muscle tissue. Typically, the muscle tissue is the primary tissue consumed and turtle meat sold in local markets usually contains lean meat and bones only (Liner, 1978).

   Dietary and culinary habits with regard to which turtle tissues are edible, however, differ greatly among various populations. In some populations, the liver, heart, eggs, fatty deposits, and skin are also used (Liner, 1978). Therefore only general information on the types of turtle tissues most frequently considered edible can be presented here. State staff familiar with the dietary and culinary habits of the turtle-consuming populations within their jurisdictions are the best judge of which edible tissues should be included as part of the tissue samples used to assess the health risks to the turtle-consuming public.

4. Several of the tissue types that are considered edible include the fatty deposits found in various parts of the body, the heart, liver (usually with the gall bladder removed), and the eggs (if the specimen is a female). These edible tissues are shown in Figure H-2.

Source: Ashley, 1962.

**Figure H-1.**

Source: Ashley, 1962.

**Figure H-2.**

- Masses of yellowish-green fatty deposits may be removed from above the forelimbs and from above and in front of the hindlimbs. Fatty deposits can also be found at the base of the neck near the point where the neck enters the body cavity.

- The centrally located heart is positioned anterior to the liver.

- The large brownish liver is the predominant tissue in the body cavity and is an edible tissue eaten by some populations. Note: The small greenish-colored gall bladder lies on the dorsal side of the right lobe of the liver (not visible unless the liver is lifted upward and turned over). The gall bladder is usually removed and discarded by consumers because of its acrid taste (Liner, 1978).

- If the turtle specimen is a female, ovaries containing bright yellow-colored spherical eggs of varying sizes are located posterior to the liver and lie against the dorsal body wall.

**Note**: The fatty deposits, liver tissue, and eggs are highly lipophilic tissues and have been shown to accumulate chemical contaminants at concentrations 10 to more than 100 times the concentrations reported from muscle tissue (Bryan et al., 1987; Hebert et al., 1993; Olafsson et al., 1983, 1987; Ryan et al., 1986; Stone et al., 1980). States may wish to resect the fatty tissues, liver, heart, and eggs for inclusion in the turtle muscle tissue sample to obtain a conservative estimate of the concentration to which the turtle-consuming public would be exposed. Alternatively, States may want to retain these tissues for individual analysis. Some States already advise their residents who consume turtles to remove all fatty tissues (Minnesota Department of Health, 1994; New York State Department of Health, 1994) and not to consume the liver and eggs (New York State Department of Health, 1994). These cleaning procedures are recommended as a risk-reducing strategy.

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